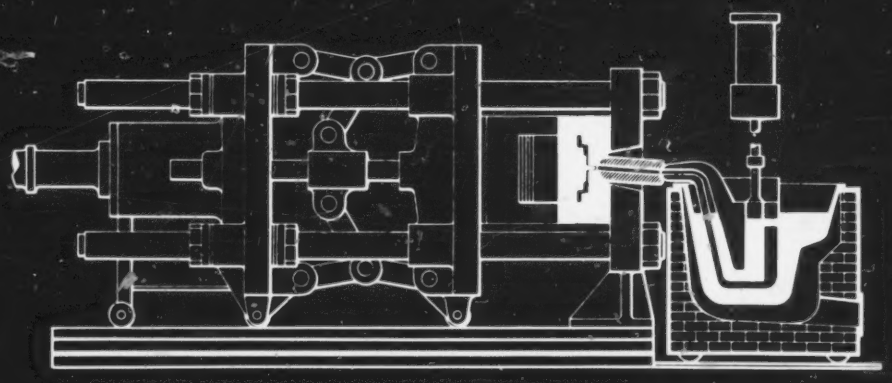
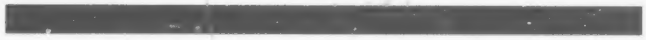
A 9600-1 U 2/84

U.S. MARKETS FOR ZINC DIE CASTING 1978-82



U.S. Zinc Die Casting Tonnage



1982	266,544 Tons
1981	304,188 Tons
1980	313,807 Tons
1979	382,655 Tons
1978	416,382 Tons

Table 1
Market-by-Market Analysis (Tonnage)

Automotive Components	1982	88,125 Tons	33.1%
	1981	98,712 Tons	32.5%
	1980	103,593 Tons	33.0%
	1979	165,761 Tons	43.3%
	1978	192,492 Tons	46.2%
Builders Hardware	1982	72,057 Tons	27.0%
	1981	79,710 Tons	26.2%
	1980	83,767 Tons	26.7%
	1979	84,543 Tons	22.1%
	1978	93,078 Tons	22.4%
Electrical Components	1982	34,996 Tons	13.1%
	1981	38,427 Tons	12.6%
	1980	41,666 Tons	13.3%
	1979	42,986 Tons	11.2%
	1978	43,384 Tons	10.4%

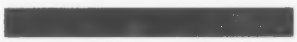
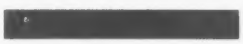
Industrial, Agricultural and Commercial Machinery	1982	21,519 Tons	8.1%
	1981	25,719 Tons	8.5%
	1980	28,014 Tons	8.9%
	1979	29,763 Tons	7.8%
	1978	26,230 Tons	6.3%
Domestic Appliances	1982	20,704 Tons	7.8%
	1981	26,897 Tons	8.8%
	1980	25,128 Tons	8.0%
	1979	27,051 Tons	7.1%
	1978	29,690 Tons	7.1%
Miscellaneous Industries	1982	11,912 Tons	4.5%
	1981	15,465 Tons	5.1%
(Scale 2:1)	1980	12,808 Tons	4.1%
	1979	11,983 Tons	3.1%
	1978	11,009 Tons	2.6%
Sporting Goods and Toys	1982	7,818 Tons	2.9%
	1981	8,663 Tons	2.9%
(Scale 2:1)	1980	10,220 Tons	3.2%
	1979	10,037 Tons	2.6%
	1978	9,519 Tons	2.3%
Scientific and Professional Equipment	1982	6,770 Tons	2.5%
	1981	7,556 Tons	2.4%
	1980	4,642 Tons	1.5%
(Scale 2:1)	1979	6,201 Tons	1.6%
	1978	6,151 Tons	1.5%
Sound and Television Equipment	1982	2,643 Tons	1.0%
	1981	3,038 Tons	1.0%
	1980	3,969 Tons	1.3%
(Scale 2:1)	1979	4,331 Tons	1.2%
	1978	4,829 Tons	1.2%

U.S. Zinc Die Casters

1982	419 Die Casters
1981	428 Die Casters
1980	443 Die Casters
1979	444 Die Casters
1978	455 Die Casters

Table 2
Market-by-Market Analysis (Die Casters)

Automotive Components	1982	216 Die Casters	52%
	1981	198 Die Casters	46%
	1980	206 Die Casters	47%
	1979	200 Die Casters	45%
	1978	209 Die Casters	46%
Builders Hardware	1982	234 Die Casters	56%
	1981	233 Die Casters	54%
	1980	243 Die Casters	55%
	1979	253 Die Casters	57%
	1978	247 Die Casters	54%
Electrical Components	1982	165 Die Casters	39%
	1981	164 Die Casters	38%
	1980	186 Die Casters	42%
	1979	193 Die Casters	43%
	1978	188 Die Casters	41%

Industrial, Agricultural and Commercial Machinery	1982		177 Die Casters	42%
	1981		181 Die Casters	42%
	1980		192 Die Casters	43%
	1979		195 Die Casters	44%
	1978		193 Die Casters	42%
Domestic Appliances	1982		133 Die Casters	32%
	1981		140 Die Casters	33%
	1980		144 Die Casters	33%
	1979		156 Die Casters	35%
	1978		152 Die Casters	33%
Miscellaneous Industries	1982		111 Die Casters	26%
	1981		118 Die Casters	28%
	1980		116 Die Casters	26%
	1979		114 Die Casters	26%
	1978		122 Die Casters	27%
Sporting Goods and Toys	1982		82 Die Casters	20%
	1981		86 Die Casters	20%
	1980		93 Die Casters	21%
	1979		90 Die Casters	20%
	1978		91 Die Casters	20%
Scientific and Professional Equipment	1982		96 Die Casters	23%
	1981		98 Die Casters	23%
	1980		102 Die Casters	23%
	1979		103 Die Casters	23%
	1978		113 Die Casters	25%
Sound and Television Equipment	1982		51 Die Casters	12%
	1981		65 Die Casters	15%
	1980		76 Die Casters	17%
	1979		76 Die Casters	17%
	1978		84 Die Casters	18%

U.S. Markets for Zinc Die Casting

Consumption of zinc by U.S. die casters plunged 13 percent last year, dropping to 266,544 tons compared to the 304,188 tons consumed in 1981 (Table 1). Zinc Institute attributes the decline to sluggish sales in all zinc die casting markets, an indication that the current economic rebound should improve the consumption total considerably for 1983.

Automotive components, zinc die casting's top end-use, contributed most to the 1982 decrease, sinking to 88,125 tons from 1981's 98,712 ton figure. However, automakers increased their zinc die casting market share which inched up from 32.5 percent to 33.1 percent.

Similarly, builders hardware back-pedaled to 72,057 tons from 79,710 tons the previous year, while improving its market share from 26.2 percent to 27.0 percent. The same held true in the electrical component category, which declined from 38,427 tons in 1981 to 34,996 tons in 1982, while picking up in market share from 12.6 percent to 13.1 percent.

The category of industrial, agricultural and commercial machinery declined to 21,519 tons compared to 25,719 tons in 1981, posting a market share step down to 8.1 percent from 8.5 percent. Despite the loss, this end-use moved ahead of domestic appliances, becoming the fourth largest consumer of zinc die castings.

Domestic appliances lost over 6,000 tons last year, moving from 26,897 tons to 20,704 tons. The result was a full-point drop in market share from 8.8 percent to 7.8 percent.

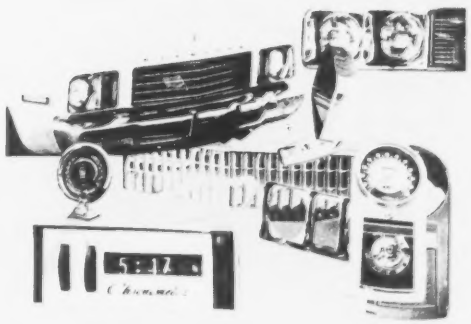
The consumption total for miscellaneous industries was 11,912 tons in 1982, down from the previous year's 15,465 ton mark. The result was a decrease in market share from 5.1 percent to 4.5 percent. Sporting goods and toys went from 8,663 tons in 1981 to 7,818 tons last year, retaining its 2.9 percent share of the zinc die casting market.

Scientific and professional equipment registered a consumption loss of 826 tons, slipping from 7,556 to 6,770 tons. Market share increased, meanwhile, from 2.4 percent to 2.5 percent. The final category of sound and television equipment maintained its 1.0 percent share of the market, while dropping in consumption from 3,038 to 2,643 tons.

Despite the decline in all end-use areas, the survey indicates that most zinc die casters survived the economic storm of 1982 (Table 2). A total of 419 of the firms reported in to Zinc Institute, compared to 1981's tally of 428 casters. ZI researchers found three new zinc die casting locations, and discovered that 12 had gone out of business last year.

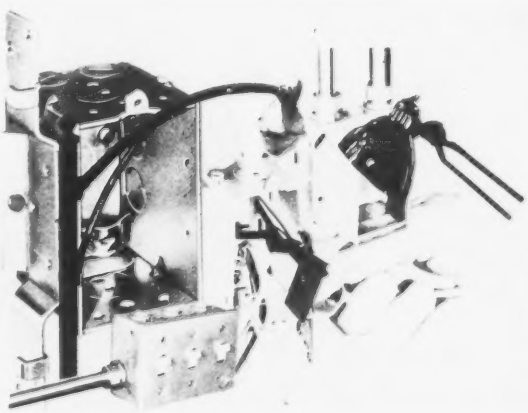
The overall 37,644 ton decline in zinc consumption came as no surprise in view of the general economic decline experienced throughout the nation in 1982. Zinc's tonnage loss reflects that, and does not constitute a loss in market share.

Automotive Components



Builders Hardware

Electrical Components



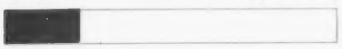
1982	88,125 Tons	33.1%
1981	98,712 Tons	32.5%
1980	103,593 Tons	33.0%
1979	165,761 Tons	43.3%
1978	192,492 Tons	46.2%

(Scale 1:2)

Zinc die castings manufactured for the automotive market at 88,125 tons were 33.1% of total 1982 sales. The decline reflects the poor year automakers had in 1982. In addition, ThinWall zinc continues to be an important factor with the introduction of 1983 models in the fall of 1982. The lighter castings saved zinc applications, but also reduced tonnage. Die casters in this market were 216 in number, 52% of the total.

The market consists of handles and locks, mechanical components, electrical components, body hardware and trim, lamp and lighting fittings, instruments and other automotive components. Pounds of zinc die castings per average car, again reflecting the increased use of ThinWall, dropped from nearly 30 pounds per car in 1978 to 28 in 1979, 25 in the 1980 models, 24.2 in the 1981 models, and 23 in 1982. Preliminary data for 1983 indicates a stabilization of this market at 23 pounds of zinc die castings in the average car.

1982	72,057 Tons	27.0%
1981	79,710 Tons	26.2%
1980	83,767 Tons	26.7%
1979	84,543 Tons	22.1%
1978	93,078 Tons	22.4%



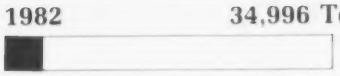
(Scale 1:2)

Builders hardware, second largest market for zinc at 72,057 tons, took 27.0% of the market. Die casters involved were 234, 56% of the total.

In spite of the serious condition of the housing industry in 1982, this market's decline appears to have slowed, showing a decline of about 7,000 tons from its 1981 level.

The market covers door and window hardware, locks and keys, furniture and cabinet hardware, hand tools and cutlery, bathroom and plumbing fittings, general hardware, marine hardware, and luggage hardware.

1982	34,996 Tons	13.1%
1981	38,427 Tons	12.6%
1980	41,666 Tons	13.3%
1979	42,986 Tons	11.2%
1978	43,384 Tons	10.4%



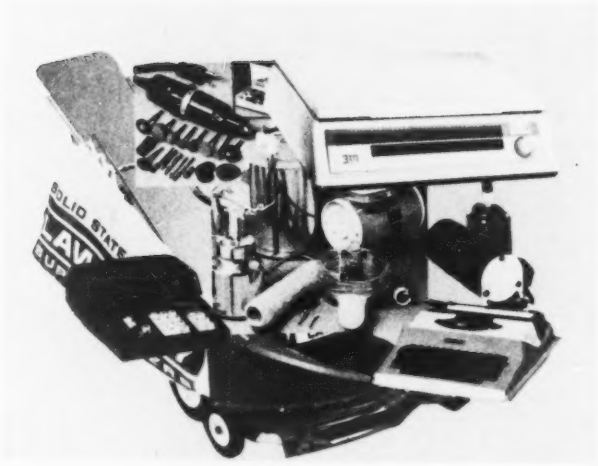
(Scale 1:2)

Electrical components reached 34,996 tons for 13.1% of the market and a clear hold on third place among zinc die cast markets. The end-use is shared by 165 die casters, 39% of the producers.

The market includes conduit fittings, switches, plugs and sockets, telecommunication equipment, switch gear, pole-line hardware, motor components, lighting fixtures and equipment.

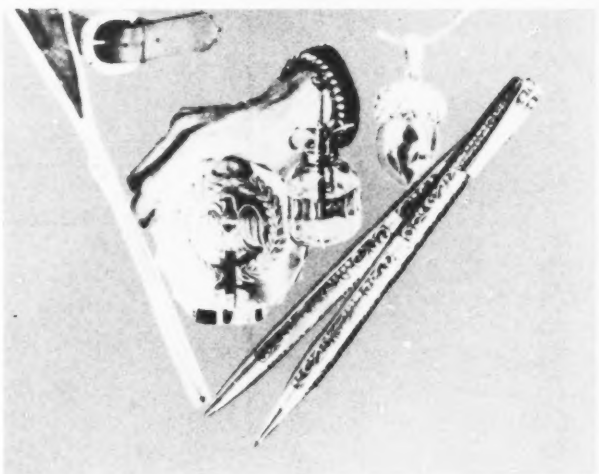
This industrially oriented market, which is more stable than consumer goods, is nevertheless strongly affected by construction, particularly in the residential housing sector.

Industrial, Agricultural and Commercial Machinery



Domestic Appliances

Miscellaneous Industries



1982	21,519 Tons	8.1%
1981	25,719 Tons	8.3%
1980	28,014 Tons	8.9%
1979	29,763 Tons	7.8%
1978	26,230 Tons	6.3%

(Scale 1:2)

This category moved back up to fourth place in 1982. Industrial, agricultural and commercial machinery accounted for 21,519 tons and 8.1% of the total. 177 die casters, 42%, were in this market.

The end-use segment includes copying equipment, office equipment, business machines, agricultural and food machinery, vending machines, machine tools, power tools, central heating and air conditioning, power-operated garden equipment, lawn mowers, snow blowers and gasoline service station equipment.

1982	20,704 Tons	7.8%
1981	26,897 Tons	8.8%
1980	25,128 Tons	8.0%
1979	27,051 Tons	7.1%
1978	29,690 Tons	7.1%

(Scale 1:2)

This market at 20,704 tons, 7.8%, dropped back to fifth place in 1982. The number of die casters, 133 or 32%, decreased slightly.

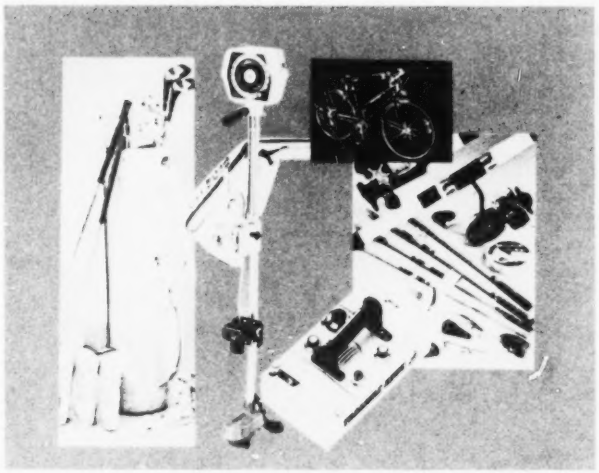
The market includes vacuum cleaners, floor polishers, refrigerators and freezers, ranges, washing machines and dryers, dishwashers, small appliances, heating appliances, room air conditioners, fans and sewing-machine components.

1982	11,914 Tons	4.5%
1981	15,465 Tons	5.1%
1980	12,808 Tons	4.1%
1979	11,983 Tons	3.1%
1978	11,009 Tons	2.6%

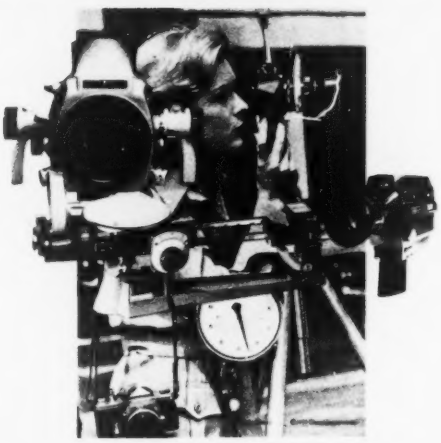
(Scale 2:1)

Markets named by relatively few die casters were arbitrarily grouped here. The category decreased over 3,500 tons in 1982 to 11,914 or 4.5% of the total. A total of 111 die casters, 26% of them, reported in this cateogry which sold to markets such as tableware, jewelry and ornaments, fancy goods and souvenirs, zippers, buttons and buckles. This was zinc's sixth largest market for 1982.

Sporting Goods and Toys



Scientific and Professional Equipment



Sound and Television Equipment

1982	7,818 Tons	2.9%
1981	8,663 Tons	2.9%
1980	10,220 Tons	3.2%
1979	10,037 Tons	2.6%
1978	9,519 Tons	2.3%

(Scale 2:1)

Zinc's die casting production in this category decreased to 7,818 tons, or 2.9% of the total market, remaining in seventh place. Eighty-two die casters, or 20%, participated.

The market consists of toys, musical instruments, and sporting goods.

1982	6,770 Tons	2.5%
1981	7,556 Tons	2.4%
1980	4,642 Tons	1.5%
1979	6,201 Tons	1.6%
1978	6,151 Tons	1.5%

(Scale 2:1)

At 6,770 tons, or 2.5% in 1982, this market decreased by 786 tons from the 7,556 tons recorded in 1982. A total of 96 die casters, 23% of the market, sold to makers of valves, scientific instruments, timing devices, cameras and projectors and optical instruments. This was zinc's eighth largest market for 1982.

1982	2,643 Tons	1.0%
1981	3,038 Tons	1.2%
1980	3,969 Tons	1.3%
1979	4,331 Tons	1.2%
1978	4,829 Tons	1.2%

(Scale 2:1)

With 2,643 tons and 1.0% of the market, these consumer-oriented products also dropped in 1982. Fifty-one die casters, 12%, were involved in this market area. It consists of assemblies and parts for radio, television, record and tape players. This was zinc's ninth largest market for 1982.

This continuing decline can be attributed to increased foreign imports in the electronics sector.

While every effort has been made to assure that the information given in this booklet is technically correct, Zinc Institute Inc. does not warrant its accuracy.

Zinc Institute Inc.

292 Madison Ave., New York, N.Y. 10017

Fraser Industrial Mall, 17080 Masonic, Fraser, MI 48026

5M-9-83

PRINTED IN U.S.A.